6DX8

High-Mu Triode—Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater Characteristics and Ratings *(Design-Center Values):*		
Voltage (AC or DC)	6.3 ± 0.6	volts
Current at heater volts = 6.3 . . .	0.720	amp
Peak heater-cathode voltage (Each unit):		
Heater negative with respect to cathode.	200 max.	volts
Heater positive with respect to cathode.	200 max.	volts
Direct Interelectrode Capacitances:[a]		
Triode Unit:		
Grid to plate	2.7	μμf
Grid to all other elements except plate.	4.0	μμf
Plate to all other elements except grid	2.3	μμf
Grid to heater.	0.1 max.	μμf
Pentode Unit:		
Grid No.1 to plate.	0.1 max.	μμf
Grid No.1 to all other elements except plate.	9.0	μμf
Plate to all other elements except grid No.1.	4.5	μμf
Grid No.1 to heater	0.1 max.	μμf
Triode plate to pentode grid No.1 .	0.01 max.	μμf
Triode grid to pentode grid No.1. .	0.01 max.	μμf

Characteristics, Class A_1 Amplifier:

	Triode Unit	*Pentode Unit*			
Plate Voltage	200	170	200	220	volts
Grid-No.2 Voltage	-	170	200	220	volts
Grid-No.1 Voltage	-1.7	-2.1	-2.9	-3.4	volts
Amplification Factor. . . .	65	-	-	-	
Mu Factor, Grid No.2 to Grid No.1	-	36	36	36	
Plate Resistance (Approx.).	-	0.1	0.13	0.15	megohm
Transconductance.	4000	11000	10400	10000	μmhos
Plate Current	3	18	18	18	ma
Grid-No.2 Current	-	3	3	3	ma

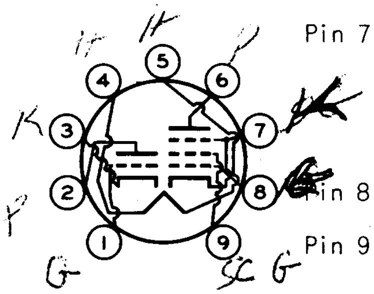
Mechanical:

Operating Position.	Any
Type of Cathodes.	Coated Unipotential
Maximum Overall Length.	2-5/8"
Maximum Seated Length	2-3/8"

6DX8

Length, Base Seat to Bulb Top (Excluding tip)	2" ± 3/32"
Diameter	0.750" to 0.875"
Dimensional Outline	See *General Section*
Bulb	T6-1/2
Base	Small-Button Noval 9-Pin (JEDEC No. E9-1)
Basing Designation for BOTTOM VIEW	9HX

Pin 1 - Triode Grid
Pin 2 - Triode Plate
Pin 3 - Triode Cathode
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Pentode Plate



Pin 7 - Pentode Grid No.3, Pentode Cathode, Internal Shield
Pin 8 - Pentode Grid No.1
Pin 9 - Pentode Grid No.2

AMPLIFIER — Class A_1

Maximum Ratings, *Design-Center Values:*

	Triode Unit	*Pentode Unit*	
PLATE SUPPLY VOLTAGE	550 max.	550 max.	volts
PEAK PLATE VOLTAGE with maximum plate ma. = 0.1[b]	600 max.	–	volts
PLATE VOLTAGE	300 max.	300 max.	volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE	–	550 max.	volts
GRID-No.2 VOLTAGE	–	300 max.	volts
CATHODE CURRENT	12 max.	40 max.	ma
GRID-No.2 INPUT	–	1.7 max.	watts
PLATE DISSIPATION	1 max.	4 max.	watts

Typical Operation (Pentode Unit):

As video-output tube

Plate Supply Voltage	170	200	220	volts
Series Plate Resistor	3000	3000	3000	ohms
Grid-No.2 Voltage	170	200	220	volts
Grid-No.1 Voltage	-2	-2.8	-3.3	volts
Transconductance	10400	10000	9700	µmhos
Plate Current	18	18	18	ma
Grid-No.2 Current	3.2	3.1	3.1	ma

Maximum Circuit Values:

	Triode Unit	*Pentode Unit*	
Grid-No.1-Circuit Resistance:			
For fixed-bias operation	1 max.	1 max.	megohm
For cathode-bias operation	3 max.	2 max.	megohms

[a] Without external shield.
[b] With duty factor = 0.18 maximum and pulse duration = 18 microseconds maximum.